FEASIBILITY STUDY

Kannapolis
SR 2126 (Earnhardt Road)
from NC 136 (Centergrove Road) to I-85
Cabarrus County

U-2833

Prepared by
Program Development Branch
Division of Highways
N. C. Department of Transportation

Maria N. Wall
Highway Planning Engineer

Mohammed B. Mustafa
Highway Planning Engineer

1/6/93
Date

Whitmel H. Webb, III, P.E.
Head of Feasibility Studies

Kannapolis
SR 2126 (Earnhardt Road)
from NC 136 (Centergrove Road) to I-85
Cabarrus County

U-2833

I. GENERAL DESCRIPTION

This is a feasibility study for the realignment of SR 2126 (Earnhardt Road), from NC 136 (Centergrove Road) to I-85, in Kannapolis, a distance of approximately 1.4 miles (See Figure 1). The improvement will also include the realignment of the NC 136 and SR 2126 intersection. The recommended typical section along SR 2126 is a five-lane, 64-foot, face-to-face, curb and gutter section, with 8-foot berms on 120 feet of right-of-way without access control. Estimated cost of the project is $6,100,000 ($3,000,000 for right-of-way and $3,100,000 for construction).

This study is not a detailed planning/environmental investigation. A feasibility study presents recommended cross sections for improvements, general alignments of improvements, and estimated cost of construction and right-of-way. This study attempts to identify any potential environmental, permitting, or other observed issues which deserve consideration in the planning and construction stages.

II. NEED FOR PROJECT

This project was requested by the City of Kannapolis. SR 2126 is classified as a Major Urban Thoroughfare on the 1988 Concord-Kannapolis-Landis-China Grove Thoroughfare Plan and as a local road on the Statewide Functional Classification System.

Improvements are needed to relieve traffic congestion between Kannapolis and Concord. Copperfield Boulevard is currently under construction at the east side of the I-85 interchange (See Figures 1 and 2). Copperfield Boulevard is a five-lane, 59-foot, face-to-face, curb and gutter section with 8-foot berms. Upon completion, Copperfield Boulevard will connect SR 2126 to NC 136. Land use along Copperfield Boulevard is mainly industrial and commercial. NC 136 is being developed as a major connector between Concord and Kannapolis, however, traffic congestion has lowered the level of service for this facility. The realignment of SR 2126 and the construction of Copperfield Boulevard will provide an alternate route between Concord and Kannapolis to relieve some of the traffic congestion on NC 136.

Existing SR 2126 consists of a two-lane, 18-foot pavement with 4-foot shoulders on 60 feet of right-of-way, with no access control from NC 136 to the I-85 interchange.

The west terminal of the project is at a point on NC 136 approximately 300 feet west of SR 2154 (See Figure 2). The existing cross section at the west terminal is a two-lane, 24-foot pavement, with 8-foot shoulders. Land use is predominantly residential in this area.

The east terminal of the project is at the west side of the I-85 interchange (See Figure 2). The existing cross section at the east terminal is a two-lane, 20-foot pavement with 8-foot shoulders. Bridge number 133 carries SR 2126 over I-85 at the interchange. It has a clear roadway width of 72 feet, and a sufficiency rating of 90.6. This project should not cause any changes to the existing bridge or the I-85 interchange. Land use is predominantly rural residential in this area.

Estimated 1993 Average Daily Traffic (ADT) on the existing SR 2126 is 400 vehicles per day (vpd). With the completion of Copperfield Boulevard, and increasing traffic demand on NC 136, projected traffic demand on SR 2126 is expected to increase to 10,600 vpd in 1993, and to 24,800 vpd in 2013.

With the recommended improvements, SR 2126 would offer a level of service (LOS) B to the 10,600 vpd anticipated in 1993, and LOS D to the 24,800 vpd anticipated in 2013. The I-85 interchange ramps at SR 2126 will be signalized and would offer a LOS B or better through the year 2013.

During the period from August 1989 through July 1992 a total of 3 accidents were reported along the studied section of SR 2126. This resulted in an accident rate of 1,141.6 accidents per 100 million vehicle miles (ACC/100MVM), compared to a statewide average of 305.2 ACC/100MVM. No fatalities were reported. Rear end accidents accounted for 67% of the accidents. Vehicles running off the road accounted for 33% of the accidents. The recommended typical section and improved alignment are expected to reduce the accident rate.

III. RECOMMENDATIONS

It is recommended that SR 2126 be realigned, utilizing a five-lane, 64-foot, face-to-face, curb and gutter section, with 8-foot berms on 120 feet of right-of-way with no access control (See Figure 2). The new alignment will eliminate two sharp curves along the existing SR 2126 and provide improved traffic movements between the I-85 interchange and NC 136.

The realignment of the intersection of NC 136, SR 2126, and SR 2114 will also provide improved traffic movement. The recommended typical section for the realignment of the intersection of NC 136 and SR 2114 (Centergrove Road) is a two-lane, 44-foot, face-to-face, curb and gutter section with 8 foot berms on 100 feet of right-of-way with no access control. The eastbound and westbound lanes of the signalized intersection will have one left-turn lane, one thru-lane, and one right/thru-lane. The northbound and southbound lanes of the signalized intersection will have two left-turn lanes, and one thru/right-lane.

Due to the realignment of the intersection of NC 136 with SR 2126 and SR 2114, SR 2213 (Eastway St.) will become a cul-de-sac, eliminating access to NC 136 from this road.

A residential subdivision is located in the northwest quadrant of the intersection of NC 136 and SR 2213. Access to NC 136 is provided by SR 2213 and SR 2154 (Little Texas Rd.). When SR 2213 is closed off to NC 136, SR 2211 (Villa St.) will be extended between SR 2154 and SR 2213 to provide alternate access, via SR 2154, to NC 136. The recommended typical section for the extension of SR 2211 (Villa Street), from SR 2154 to SR 2213, is a two-lane, 28-foot, face-to-face, curb and gutter section, with 8 foot berms on 60 feet of right-of-way with no access control.

Total project cost is estimated at:

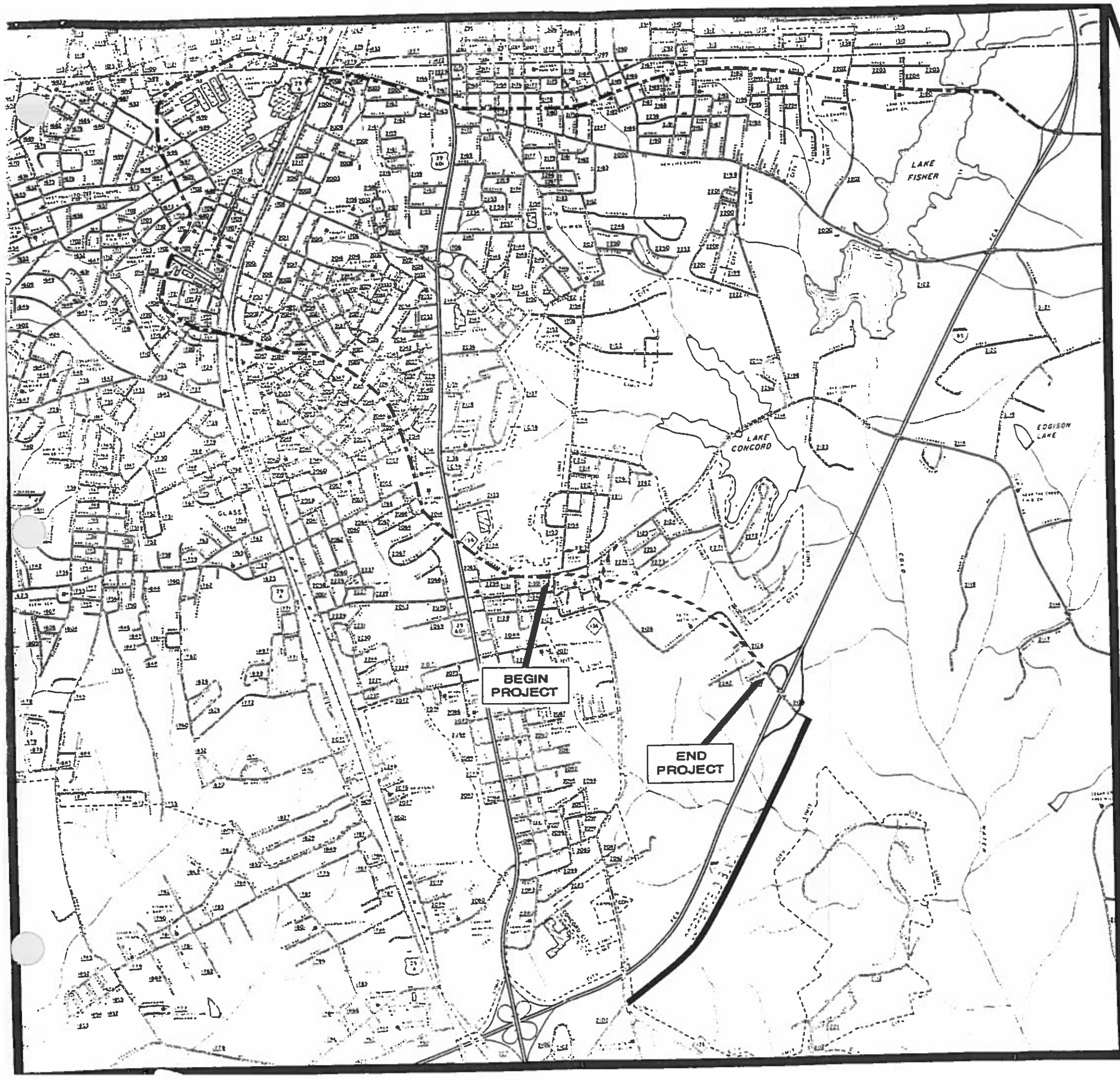
Right-of-way	$3,000,000
Construction	$3,100,000
Project Cost	$6,100,000

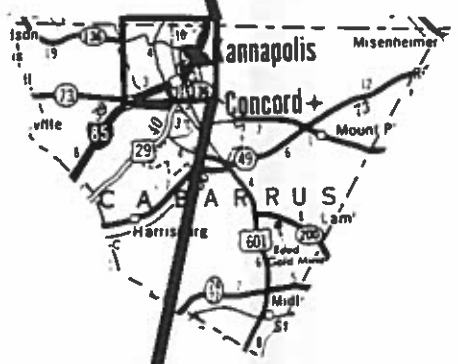
Medium utility conflicts are expected.

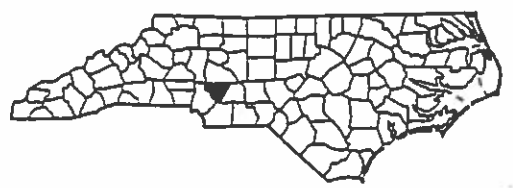
IV. OTHER COMMENTS AND CONCERNS

It is estimated that this project will require the relocation of ten residences and two businesses.

This project may require a Section 404, Corps of Engineers Nationwide Permit. The project is located within one mile of Concord Lake Watershed, WS-4. However, it is a protected area, not a critical area. No historical or architectural sites are known to be impacted. No public parks are affected. Cemeteries located on the corner of the existing SR 2126 and NC 136 and at the corner of NC 136 and SR 2154, may be affected by this project.







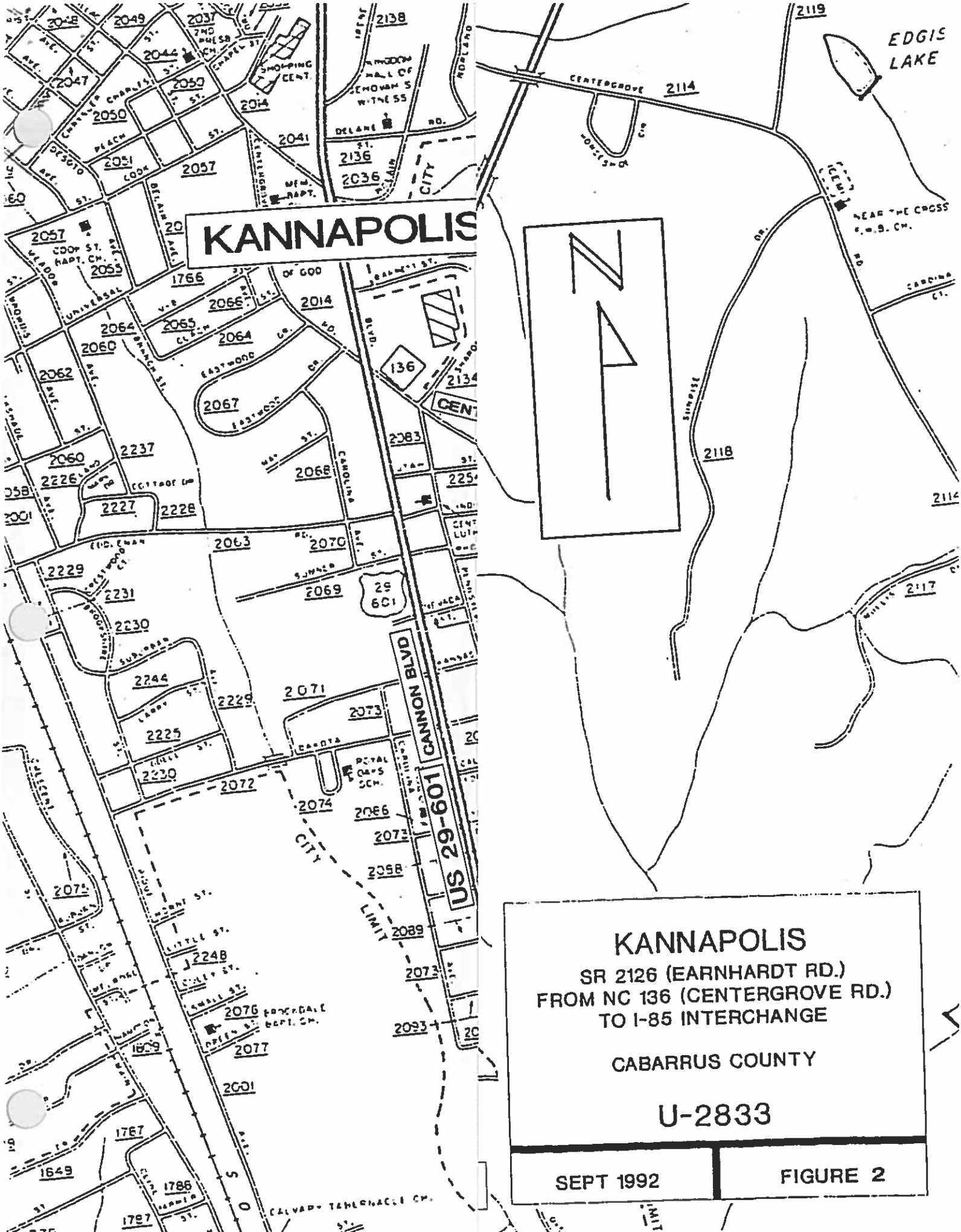
KANNAPOLIS

SR 2126 (EARNHARDT RD.)
FROM NC 136 (CENTERGROVE RD.)
TO I-85 INTERCHANGE

CABARRUS COUNTY

U-2833

SEPT 1992	FIGURE 1



KANNAPOLIS

SR 2126 (EARNHARDT RD.)
FROM NC 136 (CENTERGROVE RD.)
TO I-85 INTERCHANGE

CABARRUS COUNTY

U-2833

SEPT 1992	FIGURE 2